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ORIGINAL COMMUNICATIONS.

ON THE SPASMODIC DISEASES OF STUMPS.

BY S. WEIR MITCHELL, M.D.

I HAVE had very numerous chances of studying the curious and most interesting maladies of stumps, and have often wondered that no surgeon has been at the pains to write a monograph on stumps and their diseases. I have attempted to do something in this direction in my book on "Injuries of Nerves," but far more remains to be done in a purely surgical point of view. To the mere operator, to the physiologist and psychologist as well as to the physician, these maimed limb-remainders are full of interest. Such a thing in fact as a perfectly healthy stump, which is normally sensitive, does not twitch, calls up no memory of lost toes or fingers, and is not affected by weather, I might almost assert does not exist. The stump, in fact,—and I may say here that we have no technical name for it, and one is wanted,—the stump is throughout life a pathological part. It has a pathology rather than a physiology, so remarkable are the conditions of its being,—so rare is it to find it quite like other parts.

Among the peculiarities of stumps is a liability to spasm of the muscles, which assumes at least three distinct forms, two of which I have already described. One of these is the chorea of stumps,—a strange affection (see "Injuries of Nerves," p. 364), in which the limb is kept constantly in the most active motion. Since I first delineated this disease from the case of Col. P., who is still its victim, I have met with other examples more or less remarkable, but none so striking as his. I am satisfied that *early* section of the nerves would cure it; but so far I have had no chance to test the value of my belief.

The second form of spasm is usually but not always connected with pain in, or, rather, referred to, the lost part, and with sense of spasm in that part. There is a quivering and twitching here and there in the severed muscles of the stump. It comes and goes, in some is rarely absent, in others is seen only when there is pain, and in all is worse when the watery winds prevail. As to this point I have long ceased to doubt, and lately one of my patients has most absolutely confirmed my belief. This gentleman has kept a record, reduced to curves, of the thermal, barometric, and hygrometric states of the air, of the winds, and even of the ozone, and by following the lines of the pain-curve it is possible to see just what atmospheric states favor in him the condition—pain. This curious and valuable record, kept by a man of great accuracy and remarkable scientific endowments, I shall before long make public. Suffice it now to say that it proves most perfectly the capacity of the stump to indicate by pain and spasms the approach of winds which bring rain, and not alone the east wind, which some of my patients insist is the only one thus competent.

In some cases the twitching is only in one or more muscles, not in all, and, when limited, is in certain cases useful, because, as the neuro-muscular distribution is rarely anomalous, and as the seat of pain in the lost part is not always distinct, we can tell by the muscles concerned in spasm what main nerve-trunk must be cut to relieve the pain.

As a more innocent malady, without pain as its companion, this local twitching of stump-muscles is very common. I have said that there were three forms of stump-spasm; but there is one more which is excessively rare, and is apt, when it does come, to follow some sudden injury to a tender stump.

This form of spasm is not so much in the stump as in the muscles of the same limb which are a little remote and have not been severed by the knife. It consists in a single violent tonic contraction three or four times a day,—a spasm which is like a cramp, and is horribly painful. I have seen this but twice. In one case the deltoid was concerned, and in another the short intra-pelvic flexors of the thigh. The attacks in both followed a blow; in the first case on the stump, in the second on the groin (a thigh-amputation high up). In both, relief was obtained by ice-dressings and leeching.

My last form of stump-spasms is altogether peculiar, nor can I find it described elsewhere; but, as I have said, this is not surprising, because the surgical literature of stumps is disgracefully small and incomplete.

In some cases of myelitis, in some instances of spinal sclerosis, and in rare hysterical conditions, the affected limb is liable to become suddenly and often most violently convulsed, the spasms in certain instances extending to the rest of the body, and in others remaining confined to the member in which they began. These attacks appear in some cases to be spontaneous, or, rather, to be discharges of force from motor ganglia in abnormal states. In other examples they are brought about by any cause which, like a blow or tickling, operates from without through the afferent nerve-tracks. This description applies equally to the stump-spasms I am about to describe.

I saw the first of my cases during the war, and shall describe it from memory, as I have mislaid my notes.

A sergeant lost his leg from a Minié-ball, which necessitated an amputation above the right ankle. At least three months later, he began to have pain in the stump and absent foot. It was not severe. The pain was associated with twitches of the stump-muscles. About nine months from the date of amputation he received a fall on the stump, bruising it badly. Some days after, while washing it with cold water, it became agitated, and finally convulsed, the extensors and flexors acting irregularly. The attack lasted a few minutes, and was the first of many such, which increased in severity until any rough touch brought on a fit that at length resulted in twitches of the right pectoral muscles; but at no time were there any marked cerebral symptoms. The patient soon after passed from under my care. Among the hundreds of stumps I have seen since, I have met with a number of like cases.

A remarkable example was seen in a gentleman æt. 50, whose right hand was injured, and, a week later, removed at the lower third of the fore-arm. He was never free of pain, or of the consciousness of the presence of the absent part, and about six weeks after its loss began to have slight attacks of stump-spasm. They increased in severity, and were usually worst in wet weather. The bad attacks began with slight twitching, which, increasing in severity, within a minute involved the fore-arm and arm, and even the deltoid, pectorals, and trapezius. On one occasion the face, he stated, was distinctly drawn to the right, and he had a slight sense of disturbed equilibrium. As his health improved,—and it had been very feeble,—the fits lessened in number, and were less grave. Prolonged use of dry cold to the stump in rubber bags, with hypodermic injections of atropia in the stump, iron, and cod-liver oil finally relieved him, and he has now, I believe, been for a year free from any bad fit. In another case, an officer who lost his thigh at the lower third had neuralgia and stump-spasms, chiefly owing to a long bout of obstinate ague. The pain came first, and when present the least careless friction or blow on the stump sent it off into a furious shaking fit, which much increased the pain. The cure of the ague and a long residence in a mountain climate relieved both troubles, but, I believe, did not quite cure either.

Sometimes the fits are altogether painless. I was examining, two weeks ago, a stump, when suddenly it went off into a violent and almost grotesque series of flexions and extensions, moving so fast that I could scarcely follow with my eye its rapid movements. There was little pain at the time, and this was a type of the more common form of this malady.

It is hardly necessary to describe it further. The attacks are rare in many cases, and I have seen it pass beyond the limb in but two. Nearly always it occurs in stumps which are painful or tender. It lasts but a few minutes, and, like some of the spinal epilepsies of Brown-Séquard, can often be arrested by holding the limb or forcibly flexing it. It almost depends in a few cases on loss or lowering of general tone of health, and in these gets better as the depressing causes are remedied. In others it is found to co-exist with perfect systemic health. I have not found that bromides relieve it, but cold to the stump and atropia-injections act better. I presume that nerve-section used early would be effectual.

I never saw a case arise very soon after amputation. I suspect—indeed, I believe—that neural irritations resulting in inflammation or scleroses of the trunks are the peripheral exciting causes, and that these finally act on their related groups of motor ganglia to produce in them an over-readiness to discharges of motor nerve force. It has been shown that amputations bring about in the spinal cord distinct sclerotic or atrophic conditions which may possibly have a share in the results described; but the fits sometimes occur too soon after amputation to admit of this explanation, and that of peripheral irritation seems the more probable one.

AN OBJECTIVE NOISE IN THE EAR, ACCOMPANIED BY SPASMODIC RETRACTION OF THE MEMBRANA TYMPANI AND OF THE VELUM PALATI.

BY CHARLES H. BURNETT, M.D.,

Aural Surgeon to the Presbyterian Hospital, and Surgeon-in-Charge of the Philadelphia Infirmary for Diseases of the Ear.

I DESIRE to place on record a short account of the above-named curious affection, occurring in a Japanese lad 18 years old, sent to me by Dr. R. M. Girvin, of West Philadelphia. The patient came under my care for treatment of a chronic suppurative inflammation of the left middle ear, with perforation of the membrana tympani, the result of acute inflammation incurred last July by diving in salt water. The patient complained only of the left ear. He did not draw my attention to the right ear, affected by the spasm about to be described, but, while inspecting the right ear for purposes of comparison, I heard distinctly a noise resembling the snapping of the finger-nails, emanating from it. The snapping was most audible when the ear of the listener was placed close to the right ear of the patient, but it could be distinctly heard ten feet from the ear from which it came. It was also heard very distinctly when the ear was placed near the right nostril of the patient. It was not, however, audible in the left ear of the patient, neither by placing my ear on his ear, nor by the use of the auscultation-tube. Inspection revealed a thickened and reddened condition of the right membrana tympani; and the patient stated that he had had, some years previous, discharges from the right ear, and I found that the hearing was defective in it.

The snapping sounds began in it last summer, one week after the acute inflammation in the left ear. At the first examination, November 25, 1874, by simple inspection I could detect no motion in the membrana tympani at each snapping, but in the course of a month, the thickening of the drum-head becoming less, I could detect at each snapping sound a very slight retraction of the drum-head at its antero-superior quadrant. Before I could thus see any motion in the drum-head by simple inspection, I placed a small glass manometer devised by Politzer, with its capillary calibre, one millimetre in diameter, filled with colored water, into the meatus of the right ear, also filled with water, the two columns of water being hermetically joined by an india-rubber stopper on the manometer. The column of water thus brought into contact with the membrana tympani showed a negative fluctuation of one-half millimetre at each snapping sound, thus demonstrating a retraction of the membrana tympani too small to be seen at that time by inspection, but since apparent upon close and attentive inspection. The drum-head moved readily under the Siglés pneumatic speculum.

The examination of the fauces revealed an elevation and retraction of the velum palati with each snapping sound in the ear and each manometric depression. The negative fluctuation,—*i.e.*, depression in the manometric column,—amounting to one-half millimetre, occurring at each snapping

sound in the ear, was entirely distinct from a very slight positive oscillation in the same column at each cardiac impulse. The latter could not always be discerned.

Deglutition, respiration, and speech exercise a marked influence over the spasmodic condition already described. The patient stated that deglutition and rapid respiration increased the frequency of the snapping noise in the ear, but that when he held his breath, the spasms (in the velum palati) and the snapping noise in the ear ceased entirely, to begin again with renewed respiratory acts. I found, indeed, that so long as the patient held his breath neither he nor I could hear any snapping, nor could I detect any spasmodic movement of the velum; but they all recurred as soon as the patient resumed his breathing. During ordinary respiration I counted twenty spasms in a minute, which appeared to be the average number; but with a voluntarily increased number of respirations the number of snappings and spasms of the velum rose to thirty in a minute. During continued speech no snappings occur.

These peculiar snappings are not in regular succession, nor synchronous with the respirations. Two or three snappings usually occur in quick succession, are followed by a pause, then there are several more, thus completing twenty in a minute. These noises interfered so much with the hearing in the ear where they occurred that the patient, when specially desirous to increase his hearing, held his breath, which, as already stated, would control the spasms. I found by testing with a watch, audible normally sixty inches, that the hearing was indeed influenced by the spasms and their temporary cessation, as the patient had stated; for the watch, audible to him only on contact during the spasms, was heard two inches when they were arrested by holding his breath.

Tuning-forks held before the ear appeared to the patient to rise in pitch at each spasm. The rise in the note was well imitated by the patient. This altered pitch we are prepared to hear of, because at each spasm the drum-head is retracted, and rendered, by this increased tension, more sensitive to high than to low notes, and hence the ear perceives the higher to the exclusion of the lower partial tones of the tuning-forks.

The snapping sounds, but not the spasmodic elevations in the velum, can be arrested in two other ways. By throwing the patient's head back as far as he could get it; the spasms in the velum palati went on with the usual intervals, but neither the patient nor I could hear any snapping.

I could also arrest the noise by pressing my finger firmly against the velum, and pushing it upward towards the pharyngeal opening of the right Eustachian tube. While I could still feel a powerful twitching with the usual intervals of repose of the muscular structures thus pressed upon, all snapping noise ceased.

Pressure upon the left half of the velum palati and mediately upon the pharyngeal opening of the left Eustachian tube revealed no twitching in that region, nor did it influence in any way the spasms and noises on the opposite side of the pharynx and in the right ear.

Johannes Müller was disposed to attribute all such cases of objective entotic noises, resembling the snapping of the finger-nails, to clonic spasms of the tensor tympani muscle; but Politzer and Luschka, independently of each other, and about the same time (1862), proved conclusively that many cases of such noises previously ascribed to spasmodic twitchings in the tensor tympani were really due to a spasmodic contraction of the muscles of the velum palati, *producing a sudden separation of the anterior from the posterior wall of the pharyngeal portion of the Eustachian tube.*

This hypothesis has been substantiated by cases reported by Boeck,* Schwartze,† Politzer,‡ A. Schrapinger,§ Küpper,‖ and others.

In Dr. Küpper's case, the spasms, amounting to one hundred and forty in a minute, were temporarily arrested by pressure at the base of the tongue, and partially relieved—*i.e.*, diminished in frequency—by pressure on the lesser occipital nerve near the insertion of the sterno-cleido-mastoid muscle; but they were in no way connected with the act of respiration or with the circulation.

Moos relates a case of retraction of the membrana tympani with objective noise in the ear, occurring only at deglutition (*Archives of Ophthalmology and Otology*, vol. ii.).

The quality of the objective noise in these cases is universally likened to the snapping of the finger-nails. Its cause is without doubt due to the sudden separation of the anterior from the posterior wall of the pharyngeal portion of the Eustachian tube, and *not to any spasm in the tensor tympani muscle.*

This would seem to be corroborated by the fact that this peculiar objective noise in the ear is accompanied by spasm of the velum palati more frequently than by any other one symptom. The cases where it has not occurred, or where no mention is made of it, are very rare. Positive knowledge as to its absence is gained in only one case (Schwartze, *Arch. f. Ohrenheilk.*, Bd. vi., 1870). Again, the fact that the noise in my case is so distinctly audible at the nostril of the affected side, seems to indicate that its cause lies in the naso-pharyngeal space at the mouth of the Eustachian tube, and not purely in the tympanic cavity. Doubtless the retraction of the membrana tympani seen in some of these cases is due to a spasm of the tensor tympani.

Treatment.—The whole number of these cases is so small, and the individual experience respecting them is so limited, that our knowledge respecting the therapeutics of this variety of aural disease is of course very meagre. So far as we can glean an opinion from what has been written concerning the treatment of these cases of clonic spasms, the induction current has effected the only apparent relief and cure (Schwartze, Politzer, and Boeck). In my

* Archiv f. Ohrenheilkunde, Bd. ii.
† Ibid, Bd. ii. and Bd. vi.
‡ Ibid., Bd. iv.
§ Sitzb. der Oestreich. Academie der Wissensch., Bd. lxii. Section 2, Oct. 1870.
‖ Archiv f. Ohrenheilk., N. F., Bd. i.

case and in many others the snapping has occasioned so little annoyance to the patient that treatment for it has not been desired, which one is ready to infer from the fact that these cases have usually been discovered accidentally by the physician to whom the patient has applied for relief from other aural troubles.

EXPERIMENTS ON DIGESTION.

BY ROBERT M. SMITH, A.B.,

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THE following experiments were made upon the contents of the stomach of a criminal (Heidenblut), previously of good health, who was executed while digesting a hearty breakfast of hard-boiled eggs, bread and butter, and coffee. When his stomach was examined, some two hours after his death, it was found to present the usual redness of the organ whilst digesting, more deeply marked, however, in the great cul-de-sac and along the greater curvature towards the pylorus, the latter being due to the semi-erect position in which the body was placed after death having caused the gravitation of the contents to these parts. Over the portion of deepest redness the mucous membrane was soft and pulpy, and the blood-vessels more apparent than in other places; incipient digestion of the mucous coat had evidently taken place, owing to the action of the solvent juice upon it. The mucous coat, after the organ was emptied, was somewhat plicated from the contraction of the muscular walls. The contents, which nearly filled the organ, were of a grumous consistence, somewhat yellowish in color, and of decidedly acid reaction to test-paper. They contained portions of undigested albumen, and a large amount of glucose as discovered by Trommer's test. Microscopical examination of the contents revealed the presence of numerous oil-globules, granular matter, and a large number of partly broken-up starch-granules; the presence of starch was further certified by its presenting the usual reaction with iodine.

These contents of the stomach were now subjected to filtration in a vessel which had been previously washed with distilled water and tested with nitrate of silver, and found to be perfectly free from all chlorides. Upon the addition of nitrate of silver to the *filtrate* thus obtained, a dense white precipitate was thrown down; but upon adding a small quantity of chemically pure nitric acid, a *considerable* portion of the precipitate was re-dissolved, so, perhaps, justifying the supposition that it was not entirely composed of the chloride of silver, which is perfectly insoluble in nitric acid, but partly of the lactate, or of some other salt of silver which is soluble in nitric acid.

This filtrate, after having shown an acid reaction to litmus-paper, was carefully poured through a chemically clean funnel into a chemically clean glass retort, so that no particles of the fluid could adhere to the neck of the retort and be carried over mechanically in the process of distillation. The retort was now slowly heated in a sand-bath to a little *below* the boiling-point of the fluid, so as to insure the passage of volatile matters alone into the condenser; by this means—viz., of keeping the fluid constantly in a state of incipient ebullition—it was impossible that any non-volatile salt or matter of any kind could be carried over in the spray of the distilling fluid. After this heat had been kept up for a little less than an hour, there was condensed in the receiver about a drachm of a yellowish fluid of a watery consistence. This distillate showed a distinctly acid reaction to test-paper, and the question now to be determined was whether this acidity was due to free hydrochloric acid, as has been generally supposed by physiologists, or to the presence of some other acid.

To determine whether any free hydrochloric acid was present, two drops of a strong solution of nitrate of silver were added to about thirty drops of the distillate, when a decided precipitate, resembling the chloride of silver, was visible; upon adding a single drop of chemically pure nitric acid, this white precipitate was immediately re-dissolved. If this had been a chloride of silver which was thrown down, nitric acid would have been entirely unable to dissolve it. But it is known that nitric acid will dissolve the white lactate of silver, and it seemed from this fact justifiable to suppose that the precipitate might be that of the lactate of silver, as it was proven not to be a chloride.

To determine the truth or falsity of this supposition, about thirty drops of the distillate were added to an equal quantity of fresh milk, when no effect was observed; but upon boiling the milk a decidedly flocculent appearance was distinctly visible, and upon allowing the fluid to stand for an hour or two it became so solid that the test-tube could be turned on its side without the contents flowing out. It is known that lactic acid will produce this effect under these conditions, while if the acid had been muriatic the casein of the milk would have coagulated without boiling. The distillate also coagulated the albumen of a fresh egg. To determine whether these results were obtained by the action of some new substance formed in the process of distillation, or whether such a substance existed in the fluid before distillation, part of the *original filtrate* was added to fresh unboiled milk, when no coagulation was observed; but upon boiling the milk a very decided coagulation was perceptible, and upon allowing the fluid to stand the same effects took place as before. The filtrate also had the property of coagulating animal albumen.

In order to investigate this subject more fully, the contents of the stomach were subjected to dialysis in a glass vessel prepared for the purpose by forming a diaphragm of parchment paper, and the dialyzer so made was suspended in a porcelain vessel containing a small quantity of distilled water and allowed to remain at rest for forty-eight hours. Then the dialyzed fluid was seen to present a strongly acid reaction. To ascertain whether this acidity was again due to lactic acid, a small quantity was added to an equal amount of fresh unboiled milk, when no effect was observed, but upon subjecting

it to heat the casein became entirely coagulated and in a few minutes was perfectly firm. To this fluid obtained by dialysis were now added a few drops of a solution of nitrate of silver, when a dense white precipitate was thrown down, which was only partly cleared upon the addition of nitric acid, showing that it was not entirely composed of the lactate of silver, but probably partly of the chloride of silver; but then this chloride could not have been formed from free hydrochloric acid, because the milk-test showed that none existed. It was probably made from some of the soluble chlorides, as of sodium, which are known to exist in the stomach. In fact, this man had probably taken some of this salt with his food at breakfast, and then this chloride had undergone dialysis as freely as the lactic acid. As these facts are strongly characteristic of lactic acid, it seems justifiable to conclude that free hydrochloric acid, as such, did not exist in this gastric juice, but that its acidity was due to the presence of free lactic acid.

To determine the presence of phosphates, the original filtrate was evaporated to dryness over a hot sand-bath, and the residue then completely charred; after all organic matters had been completely destroyed, the ash was dissolved in hydrochloric acid, and then carefully filtered. This clear filtrate that thus resulted was neutralized with ammonia, when a white precipitate, the phosphate of lime, was thrown down. The quantity of phosphate was very small. There was no evidence of the acid phosphate of lime.

The following deductions confirm entirely those obtained by Profs. F. G. Smith and Rogers, of the University, from the analysis of the gastric juice of Alexis St. Martin.

I. The gastric juice presents an acid reaction both before and after filtration and distillation.

II. The acidity in this instance was not due to the presence of hydrochloric acid.

III. Lactic acid did exist.

IV. Acid phosphate of lime showed no evidence of its presence.

V. Neutral phosphate did exist, and was held in solution by the lactic acid.

I would take this opportunity of expressing my thanks to Mr. George Hay, a member of the class, and a gentleman of great experience as an analytical chemist, under whose careful supervision these experiments were conducted.

Physiological Laboratory of the Univ. of Penna.

NOTES OF HOSPITAL PRACTICE.

PENNSYLVANIA HOSPITAL.

SERVICE OF R. J. LEVIS, M.D.

Reported by Dr. John B. Roberts.

FIXED DRESSINGS IN THE TREATMENT OF FRACTURES—THE COMBINATION OF GLUE AND OXIDE OF ZINC A NEW MATERIAL FOR FIXED DRESSINGS.

In treating fractures it is often desirable to apply some form of dressing which will hold the parts in perfect apposition and yet allow the patient to be out of bed, moving about the wards of the hospital, or even taking exercise in the open air. This is not a matter of much difficulty in fractures of the bones of the upper extremity, for then, after an ordinary wooden or pasteboard splint has been adjusted, the patient can walk about as freely as he chooses; but until within a few years a fracture of the leg was kept at rest by using a fracture-box, and the patient confined upon his back for five or six weeks.

Undoubtedly the greater frequency of ununited fractures and delayed union in the lower than in the upper extremity is to be attributed in part to keeping the limb long in a horizontal position, or even elevated above the rest of the body; for the natural position of the limb is dependent, and its blood-supply is necessarily interfered with when the patient occupies the supine position for a period of five or six weeks.

The necessity for a dressing to overcome this difficulty has long been recognized by surgeons, and accordingly the different forms of immovable apparatus for the treatment of fractures have been devised. As originally proposed by Seutin, it has been modified and much improved from time to time, until now perfection has perhaps been attained in a new material or composition devised by Dr. Levis and used for some time in the Pennsylvania Hospital.

It is necessary that judgment be exercised to determine when the fixed dressing shall be employed, for its premature use may occasion much harm. It is not desirable to encase a limb in the immovable apparatus until inflammation and swelling have subsided, because, by exerting undue pressure, it might readily induce gangrene of the limb. After the patient, however, has been kept at rest for a week or more, and after the tumefaction and inflammation consequent upon the injury have abated, it is proper in simple fractures to apply the fixed dressing, which, permitting the patient to rise from his bed and go about on crutches, lessens very much the weariness of protracted decubitus.

Many substances have been recommended to give the requisite stiffness to the dressing, some of which are desirable on account of cheapness, others because of the rapidity with which they harden; the great desideratum being to have an article which possesses both these essential characteristics. Starch, dextrine, silicate of sodium or potassium, gum arabic and chalk, plaster of Paris, glue, and paraffine have all been experimented with, and each has found its admirers.

The starch bandage is applied by carrying an ordinary roller, which has been wet, up the limb, previously wrapped in cotton wadding, as far as deemed necessary; boiled starch is then rubbed into the bandage, after which the roller is carried downwards to the extremity of the injured limb, and again saturated with starch. This manipulation is continued until several thicknesses have been applied, when pasteboard splints softened by boiling water and moulded to the inequalities of the surface are adjusted to the parts, and surrounded by another layer of starch bandage. In the course of twenty-four or thirty-six hours the starch becomes dry, and the dressing, strengthened by the interlying pasteboard, acts as a firm support to the fractured bones.

The silicate of potassium or of sodium may be used in the same manner; but, as it dries much more rapidly than starch, it can be applied upon many layers of bandage, and therefore acquires the requisite degree of firmness without pasteboard as an adjunct, which only serves to complicate the dressing.

When these dressings have become perfectly dry, they can, if it is thought necessary, be split up the middle of the leg by Seutin's scissors, and then retained in apposition, and their pressure regulated, by an additional bandage.

A very excellent fixed fracture-apparatus, denominated the Bavarian dressing from its extensive use in the late Franco-German war, is made with plaster of Paris in the following manner. Two pieces of flannel, each large enough to envelope the limb once, are selected and laid one upon the other; down the middle from one end to the other they are stitched together by two seams, say two lines apart, in order to form a hinge when the dressing is complete. The flannel is adjusted to the limb so that the seams lie along the posterior aspect; and then, while an assistant holds the *inner* layer close around the limb, the surgeon rubs upon it a sufficient quantity of plaster mixed with water. Before this becomes hardened the outer layer of flannel is also drawn up tightly around the limb, and thus, in a few moments, is made a case composed of two layers of flannel with plaster between them.

As soon as hard, the case is removed by opening it like a book, which can be done because the seams prevent the plaster getting between the layers posteriorly, and thus form a hinge; the edges of the flannel having been trimmed off smoothly, the apparatus is re-applied, and retained by a simple roller.

This form of dressing was much employed in the hospital a year ago; but although the limb is firmly encased, and the plaster rapidly desiccates, yet there are a number of objections to its use. In the first place, making the case is a dirty process; then the plaster sometimes becomes brittle and crumbles; but the greatest objection is the weight of the dressing, which renders it tiresome for the patient to walk about. From the rapidity with which it can be applied, the Bavarian dressing is particularly suited for military emergencies, when men having sustained fractures must be transported, but for civil practice it is too heavy for the patient to wear.

After experimenting with various kinds of fixed dressings, Dr. Levis seems to have arrived at one which fulfils all requirements; being cleanly in its application, drying with sufficient rapidity, removable without difficulty, exceedingly light, and withal very cheap. The fixing material is ordinary glue, with which oxide of zinc has been incorporated, either by the manufacturer or by the surgeon at the time of using it, in order to cause it to harden rapidly.

Several pieces of flannel—old blankets or worn-out underclothing answering the purpose admirably—are selected and cut the requisite size. One of these is laid around the limb, and the two edges are tightly stitched together along the anterior surface, allowing the edge to project above the seam; then the melted glue, with oxide of zinc, is painted upon this with a brush. The dressing may be strengthened by an additional layer of flannel or blanket saturated with the glue and oxide of zinc, and made to adhere to the underlying layer. A third or even a fourth layer may be thus applied, if it is deemed necessary, and the limb supported until the dressing dries, which requires from four to eight hours.

The stitches of the seam on the front of the limb having been cut with scissors, the edges of this elastic case are sprung apart, and the dressing removed. The edges are then trimmed smooth, and a number of eyelets inserted, in order that the case may be laced like a shoe, and the degree of pressure regulated.

This fixed fracture-apparatus is exceedingly light, is made from materials almost everywhere obtainable, and is much cheaper than the silicate dressing. There are at all times pieces of waste flannel or cloth about a large hospital which can be appropriated, while the glue and zinc could probably be supplied at a very low price per pound,—a quantity sufficient for the manufacture of many such splints. Another advantage is its elasticity, which permits its removal without endangering the splint, for it can be pulled apart, and immediately springs into place around the limb to which it has been moulded.

By a little care and dexterity in stitching on the layers of flannel, the surgeon can readily shape the dressing so that both the leg and the foot are completely encased.

TRANSLATIONS.

THERAPEUTIC AND PHYSIOLOGICAL ACTION OF IPECACUANHA AND OF ITS ALKALOIDS.—Dr. Polichronie has made, in M. Vulpian's laboratory, a series of very interesting researches in order to ascertain the mode of action of ipecac and emetine. M. Polichronie's conclusions are as follows:

1. Emetine is the true active principle of ipecacuanha; all the physiological, therapeutic, and toxic properties possessed by this plant are due to the presence of its alkaloid.

2. In dysentery, as in diarrhœa, ipecac administered by injection possesses as active properties as when it is given by the mouth, according to the Brazilian method.

3. Ipecac by injection is one of the best forms of treatment which can be employed in cholera infantum; it may be supported for a long time without enfeebling young subjects.

4. In tuberculous diarrhœa, whatever may be the period, injections of ipecac give good results.

5. This medication may also be employed with advantage to combat the profuse sweats of phthisis.

6. Emetine is a highly toxic substance: it may give rise to death in animals in two ways,—sometimes by prostration of the nervous system, sometimes, when given in smaller doses, by the intense enteritis which it provokes.

7. Two hypotheses are possible to explain the favorable action of ipecac in diarrhœa: *a*, a vasculo-constrictive action, which diminishes the abundance of the secretions; *b*, a substitutive action, which results from the inflammation of the mucous membrane.

8. The vaso-constrictive action does not take place, as experiments made upon the nerve of the submaxillary gland and upon the arterial tension show.

9. The production of inflammation of the gastro-intestinal mucous membrane, the duration of which is prolonged after vomiting has been brought about, seems, on the contrary, to plead in favor of the second view.

10. Emetine causes vomiting at the moment when it is eliminated by the gastric mucous membrane, while vomiting is retarded, and even more frequently does not take place after section of the par vagum. It is quite different with apomorphia and tartar emetic. These two substances bring about vomiting as quickly when these nerves are cut as when they are intact.

11. Finally, physiological and chemical researches upon the medicine argue in favor of elimination of emetine by the gastro-intestinal mucous membrane.

12. Emetine has no direct vomitive action upon the central nervous system, as is proved by direct injections of this substance into the cerebral arteries.

13. Therefore, it may be admitted that, in diarrhœa, emetine acts by substituting for the pathological inflammation a fresh one tending to spontaneous cure, its effect in these conditions being in every way comparable to that of purgatives or nitrate of silver.

14. In sweats we can no longer admit a vaso-motor action, and we are obliged to believe either that being eliminated by the sudoriferous glands it tends to restrain their secretion, or, better, that it acts by the revulsion which it causes to the digestive tube (Thèse de Paris, 1874).—*Bulletin Général de Thérap.*, January, 1875. X.

CHLOROSIS IN CHILDREN.—Dr. M. E. Bouchut recently delivered a clinical lecture on this subject at the Hôpital des Enfants Malades. The lecturer began by alluding to the fact that chlorosis as found in young girls is rare among children. Usually the chlorosis of children is rather a pseudo-chlorosis, due to some visceral affection. The two diseases are frequently confounded, but a distinction should be made between them, since we know that in true chlorosis we have a spontaneous insufficiency of blood-globules, or rather an insufficiency the causes of which are unknown to us. In pseudo-chlorosis, on the contrary, there are always lesions of a more or less appreciable kind, visceral affections evident or latent. It may occur after epistaxis, intestinal hemorrhage following enteritis, albuminous nephritis, chronic bronchitis, chronic amygdalitis. Any of the diseases of children may bring about this condition, of which physicians too often do not take proper account.

M. Bouchut then directed attention to certain cases in the hospital illustrative of the different forms of the affection. In the first of these, a child, he remarked that the cause of discoloration of the skin would be sought in vain; the chlorosis had come almost without symptoms. There had been no diarrhœa, no constipation, no catarrhal affection of the intestine, the vesicular murmur in the lungs was normal, the heart was decidedly dilated. No blowing, præcordial, aortic, or carotid murmur could be detected save by pressure over the latter. The child had merely general discoloration of all the cutaneous and internal teguments, at least so far as the latter were visible,—that is, of the mucous membrane of the mouth and lips. The nails also were decolorized. The first symptoms noticed had been headaches; she had not suffered from pain in the side or stomach; had not had syncope.

A second case in a child presented similar symptoms, with the addition of fainting-fits. A third case was of a somewhat different nature; it concerned a young girl fourteen and a half years of age. Her disease was the chlorosis of women. She menstruated regularly but scantily; the discharge was very slightly colored. She had had dysmenorrhœa and bleeding at the nose, but the latter was not sufficient to account for the disease.

As this girl had arrived at an age when moral causes might have given rise to the disorder, this point was inquired into, but with a negative result. Her hygienic surroundings had also been good. Two other cases occurring in girls of twelve and seven years respectively were also alluded to. No cause could be ascertained for the disease in either instance.

In these four cases, united by the symptom of globular insufficiency, the diagnosis was comparatively easy, but in other cases, remarked M. Bouchut, this might present considerable difficulty. Occasionally one sees children with neuralgias, malaises, with discoloration more particularly of the mucous membranes: in these cases one has under examination a doubtful case; chlorosis is diagnosed with an interrogation-point, and the neuralgias, etc., are called chlorotic.

The child might have a blowing murmur in the region of the heart: anæmic murmur, one says; but this blowing murmur may belong to an endocarditis, and in place of a true chlorosis one may have a pseudo-chlorosis.

M. Bouchut went on to say that he had long held to the idea of an anæmic, a chlorotic murmur; little by little, however, he had finally come to abandon this notion as false. Experiments made by M. Chauveau, of Lyons, had proved that intra-vascular murmurs depend neither upon the character nor upon the density of the liquid carried in the vessels, but are to be attributed entirely to mechanical causes, and are the result of vibrations. Blowing murmurs cannot, therefore, serve in the diagnosis of chlorosis.

Virchow has lately advanced the theory that chlorosis is not produced by an insufficiency of globules, but that it is always an anomaly of the system of vessels; narrowing of the aorta, for instance. There are then numerous blisters, a honey-combed condition of the middle coat of the arteries; then hypertrophies of the heart, dilatation, fatty degeneration of the heart; such, according to Virchow, are the causes of a chlorotic affection.

The objections to this theory, according to M. Bouchut, are, first, the rarity of post-mortem examinations in cases of chlorosis; second, the impossibility of thus explaining instantaneous chlorosis brought about by moral causes; and third, an objection which would seem to annul this theory of a vascular origin of the disease is its temporary nature and curability under the influence of iron or hydrotherapy within a few months.

In the face of the existing difficulties in diagnosis, and when there is an aortic murmur, the diagnosis is to be made differentially. Finding nothing else, to an insufficiency of the blood-globules is attributed the cause of the disease. Finally, as to treatment, stimulants may be employed as well as tonic preparations, iron in all forms,—iron by hydrogen, by electricity, pyrophosphate of iron, etc. These medicines should be given in small doses and frequently repeated. In some cases ferruginous mineral waters are beneficial. In general the soluble preparations, as lactate of iron, are undesirable, on account of their tendency to form tannate of iron with the astringent fluids of the mouth, and thus cause discoloration of the teeth. The patient's stomach should also be stimulated by aromatic wines, wine of gentian, etc. Hygienic means—fresh air, bathing in sea and river water, inhalations of compressed air and oxygen, with a course of hydrotherapy or at least of daily douches—will be found beneficial.—*Le Mouvement Médical*, Dec. 19, 1874. X.

THERAPEUTIC NOTES.

TO MAKE BRANDY.—Take 20 gallons proof spirits, 5 gallons pure cognac brandy, 1¼ ounces oil of cognac, ¾ ounce œnanthic acid, ¾ ounce acetic ether, 1½ ounces tincture of kino, 1 pint simple syrup, mix, and color to suit with burnt sugar. If it is desired to imitate any other brandy, use that instead of the cognac. But this method of adulteration costs too much, as it requires pure brandy, and oil of cognac is rather expensive. The following will not cost so much.

To make cognac brandy, 20 gallons proof spirits, 2 ounces acetic ether, 2 ounces acetic acid, 2½ ounces tincture of kino, 5 pounds bruised raisins, 2 pints simple syrup, color with sugar, let it stand two or three weeks and draw off.—*S. P. Sharples, in Journal of Applied Chemistry.*

TREATMENT OF PRURITUS VULVÆ.—M. Hardy frequently employs the following formula:

℞ Hydrarg. chlor. corros., gr. xv;
Alcohol., ʒiii;
Aq. destillat., ʒiii ʒv.—M.

Tablespoonful in a tumblerful of warm water. Avoid rubbing the parts while applying the lotion.

In that form of pruritus vulvæ so often found accompanying pregnancy, Danyau employs the following formula:

℞ Zinci oxid., ʒi;
Sodii borat., ʒss;
Cerat. simpl., ʒss;
Ol. amyg. dulc., q. s.;
Morphiæ muriat., gr. iii.—M.

PHILADELPHIA
MEDICAL TIMES.
A WEEKLY JOURNAL OF
MEDICAL AND SURGICAL SCIENCE.

The Philadelphia Medical Times is an independent journal, devoted to no ends or interests whatever but those common to all who cultivate the science of medicine. Its columns are open to all those who wish to express their views on any subject coming within its legitimate sphere.

We invite contributions, reports of cases, notes and queries, medical news, and whatever may tend to increase the value of our pages.

All communications must bear the name of the sender (whether the name is to be published or not), and should be addressed to Editor Philadelphia Medical Times, care of the Publishers.

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EDITORIAL.

HOPKINS UNIVERSITY.

MUCH as we may enjoy the deserved plaudits awarded of recent times to American surgery and American medicine, every honest American physician must recognize with regret that the *science* of medicine has not flourished on this continent; that the higher original work on which the art is founded comes almost solely to us from abroad. Recently, it is true, papers of real value upon physiology and the kindred sciences have straggled into the journals; but many an insignificant European town eclipses the great continent of America in the amount of value which it yields to the abstract medical sciences. This is not because the German intellect is superior to the American, nor even because it is "more scientific and less practical" than that of the American, but because a scientific career in this country is scarcely possible to any one who has not a private fortune at his command. It is commonly stated that the German is willing to live on less than is the American, and therefore devotes himself to science although it does not pay. There may be a certain amount of truth in this, but undoubtedly that amount is very limited. In selecting a career, a young man balances the prospects on either side. Practising medicine does not pay so well in Germany as with us, and consequently the opposition to the choice of a scientific career is less. More than this, in Germany science does pay, and does pay those well whose ability enables them to draw the prizes.

Von Recklinghausen recently refused, it is said, an offer of ten thousand dollars a year to go to Vienna. Where is the professorial position in the United States that pays five thousand dollars steadily? and ten thousand dollars in Germany is worth fifteen thousand here.

A purely scientific medical career is almost an impossible thing in America; and hence it is, as the *Nation* puts it in regard to other departments, that "to the higher thought of the world we contribute shamefully little." It is therefore with the most unbounded satisfaction that we see a prospect of a better day for our country in the Hopkins University. This institution, it will be remembered, was founded by the late Johns Hopkins, of Baltimore, who left $3,500,000 for the endowment of the University, and a like sum for the foundation of a hospital in connection with it. Fortunately, the bequest was untrammelled, and the twelve trustees were well selected. They appear to be men of sufficient mind and culture to recognize the importance of using these great funds so as to build up a real seat of learning, not a mere high school dignified by the sobriquet of a university. What they have done may be judged by the following extract from a contemporary:

"They accordingly sent for President Gilman, of the California University, and asked him what he would do if he were put at the head of the new enterprise and were left perfectly free. He said in substance that he would make it the means of promoting scholarship of the first order, and this by only offering the kind of instruction to advance students which other universities offer in their post-graduate courses, and leaving the kind of work now done by under-graduates to be done elsewhere. For this purpose he would select as professors men now standing in the front rank in their own fields; he would pay them well enough to leave them at their ease as regards the commoner and coarser cares; would give them only students who were far enough advanced to keep them constantly stimulated to the highest point; and he would exact from them yearly proof of the diligent and fruitful cultivation of their specialties by compelling them to print somewhere the results of their researches.

"We are glad to say that the Hopkins trustees fell in cordially with Mr. Gilman's terms, and offered him the presidency of the new institution, and that he will probably accept it. It is a great opportunity, and we hope and believe it will be rightly used."

All this, to us, reads too much like a dream to be true. To see a really great medical school, every one of whose professors holds his position by virtue of the title-deeds he yearly produces,—a college which is in truth a great centre of medical thought, and not merely an elementary school of medicine,—

a place where the really great intellects which exist among us shall be freed from the necessity of fretting their lives away in the details of a practice which, perhaps, would be better attended to by inferior men,—a place which shall gather up that great waste of talent which eats up the higher life of our country,—to see this is more than we had ever hoped for. We can scarcely yet believe that no local reputation or influence, no "grandmothers or grandfathers," will prevail, but that only such talent as has proved itself will be admitted to this institution. One thing is certain: by choosing the best men from all portions of the United States, giving living salaries, and urging to work, these twelve trustees can do more for American medical science than the American Medical Association has done during the whole of its highly honorable and most productive career.

MOST of our city readers are familiar with the shooting of Dr. Henry R. Wevill, an account of which was published in our columns some little time since. Dr. Wevill has been, of course, left a cripple for life, with his business broken up, and all his available funds spent during the long and severe illness which followed the amputation. It is proposed to raise a fund to enable him to prosecute the person who did the shooting. We commend this matter most heartily to members of the profession. Contributions may be sent to Dr. Thomas G. Morton, or to the editor of the *Philadelphia Medical Times*.

THE funeral reform seems to us to be nearly brought to a *reductio ad absurdum* in the number of the *Lancet* for January 16. Carrying still further the suggestion of Mr. Hodan in the London *Times*, that wicker-work coffins should be substituted for the nearly imperishable caskets now employed, our medical confrère suggests that all coffins shall be abolished, so as to save expense, and so that the ground can be readily tilled, declaring that "even the wicker-work coffins would present serious obstacles to tillage."

ACCORDING to Dr. Cameron's report, twenty-one thousand pounds of unsound meat were condemned in Dublin during December last. We would like a report as to how many pounds of unsound meat were *eaten* in Philadelphia during the same period.

THE London Obstetrical Society, according to the London *Lancet*, by its almost unanimous decision that women are not admissible to its fellowship, expressed the feeling of a large majority of its members, that women by nature are disqualified from practising obstetrics.

LEADING ARTICLES.

THE USE OF COLD IN FEVER.

OF all recent improvements in medicine, no one appears to bear with it promise of so much practical life-saving value as does the use of cold in fever. The application of cold water is no new thing: employed by Galen, used not infrequently during the last century, first systematized and insisted upon by Currie, cold bathing in fever was brought before the world as a really new-born measure by Brandt of Stettin, and received the seal of permanent usefulness from the scientific clinical labors of Jurgensen at Kiel. In his article upon the subject, Jurgensen stated that from the year 1850 to 1861 there had been treated in the hospital at Kiel, according to the expectant method, three hundred and thirty typhoid-fever patients, with a mortality of fifteen and four-tenths per cent.; while from 1863 to 1866, during which period the anti-pyretic method was employed in one hundred and sixty cases, the mortality was three and one-tenth per cent.

Attracted by this remarkable statement, Liebermeister entered upon a very elaborate clinico-physiological research, and has been followed by a large number of observers. In this country the method is scarcely more than beginning to attract attention, and, so far as I know, no exhaustive résumé of the work accomplished has as yet appeared in the language, so that a series of leading articles upon the subject will probably not be lacking in interest.

The consideration of the method naturally divides itself into—first, a study of its physiological action; second, an investigation as to its clinical value; and third, a more particular account of its effect, the cases to which it is best adapted, and the method of its application.

It must be remembered that cold is not an entity, but is only a term employed for brevity's sake to express the abstraction of heat. The effect of the abstraction of caloric when the bodily temperature is above normal is in no wise dependent upon or parallel to the effect of a similar decrement of heat when the animal temperature is normal. It is therefore evident that no abstract discussion of the effects of cold upon the healthy organism is necessary to the right understanding of its therapeutic use; and I shall entirely remit the consideration of this to works on physiology and the practice of medicine.

On the other hand, a discussion of the effects of excessive temperature upon the human organism would be very pertinent to the matter in hand. The effects of acute pyrexia have, however, been so freely commented on in the columns of this journal that their consideration here is scarcely necessary.

The effects of a long-continued pyrexia, not sufficiently intense to induce immediate serious symptoms, upon the structure of the various tissues, have been elaborately investigated by Liebermeister (*Deutsches Arch. für Klin. Med.*, Bd. i.), who found that the liver, spleen,

kidneys, voluntary and involuntary muscles, blood-vessels, and even the nerve-centres undergo a granular degeneration during a continued pyrexia. The lesion was constantly present in the bodies of those who had suffered in this way during life, entirely independent of the nature of the primary disease. In cases of infectious fever in which the temperature had never been high, this granular degeneration did not exist. Previous to the investigation of Liebermeister, Zenker had demonstrated that the muscles undergo a peculiar granular degeneration in typhoid and other fevers, and the fact has been abundantly attested by later observers. I do not know that the observations of Liebermeister as to the occurrence of this lesion in non-infectious pyrexia have been confirmed, but I have no doubt of their correctness.

It is evident from the above brief résumé that in fever a primary therapeutic indication is to reduce the temperature. Of course, if possible, this should be done by checking the excessive production of heat; but, unfortunately, this often lies out of our power, and we are forced to abstract the heat by mechanical means.

It is *a priori* impossible to determine what effect upon the production of heat the rapid abstraction of it would have, but, from the well-known powers of the organism to resist external cold, it would seem probable that the heat-production would be increased rather than diminished by the abstraction of caloric. An experimental study of this problem has been made by several observers.

Weisflog (*Deutsches Archiv für Klin. Med.*, Bd. ii. p. 570) has found that the local abstraction of heat by a cold sitz-bath causes a rise in the temperature of the axilla, and that in fever-patients, unless the sitz-bath is prolonged over twenty minutes, no fall of the bodily temperature results.

In 1860, Kernig (*Reichert's Archiv*, 1860) found that a healthy man in a bath of the temperature 28°–30° C. produces about twice as much heat as normal; in baths of 24°, about three times as much; and in baths of 20° C., about four times as much.

Liebermeister found that in a healthy man exposure to cold ("Beobachtungen und Versuche über die Anwendung des kalten Wassers bei fieberhaften Krankheiten," Leipsic, 1868) for a brief period of time causes a rise in the bodily temperature, and on extending his researches into fever proved that where the external cooling was not too powerful or too long continued the same was true of fever-patients. From this it follows that the use of external cold stimulates heat-production. This has been confirmed by the chemical researches upon men of J. Gildemeister (*Virchow's Archiv*, Bd. lii. p. 131) and of Prof. Liebermeister (*Deutsches Archiv für Klin. Med.*, Bd. x. p. 89), and by those of A. Roehrig and N. Zuntz (*Pfluger's Archiv*, Bd. iv. p. 66) upon animals, which show that both in health and in fever very much more carbonic acid than normal is eliminated under exposure to cold. Cold baths, therefore, do not have a direct immediate tendency to diminish the production of animal heat, but, on the contrary, increase it. The further investigations of Liebermeister (*loc. cit.*, p. 134) and others have shown, however, that the first rise of temperature produced alike in healthy and in fever subjects by exposure to a moderate and not too long continued cold is followed after removal of the cold by a fall of bodily temperature of greater or less degree. Whilst, therefore, external cold first stimulates, it afterwards depresses the production of animal heat.

The further experiments of Liebermeister (*Deutsches Archiv*, Bd. x. p. 425) upon the elimination of carbonic acid are also in accord with his temperature-study, for he found that after the bath the elimination sank down below normal, and continued so for some considerable time.

The results of the physiological study of the effects of cold in fever may be summed up as follows:

During a prolonged and severe application of cold the bodily temperature falls, although an increased production of heat—*i.e.*, consumption of tissue—occurs; afterwards, the bodily heat continues to fall, or but slowly regains its former position, because there is a diminished production of animal heat. In most cases of fever the increased consumption of tissue which occurs during the cold bath is of no moment; in the hectic of phthisis it may be of importance.

The above considerations comprise the most important part of our physiological knowledge upon the subject in hand; in the next article the clinical evidence as to the value of cold bathing will be considered.

H. C. W.

CORRESPONDENCE.

BALTIMORE, January 30, 1875.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES:

DEAR SIR,—At a meeting of the Medical and Surgical Society, Prof. Arnold related the case of a young man, now in the Washington University Hospital, who takes from ten to twelve grains of morphia daily. He fell from a trapeze, on which he was performing, and injured his spine. He suffers intense pain, and life is miserable without morphia. He would like to abandon its use, but cannot find a substitute which will make the pain endurable. His health does not seem at all impaired by the opiate. De Quincey and Coleridge lived to a good old age, and it would seem that opium of itself does not have such a deleterious effect on the digestive system as we have been led to believe. Dr. Wilkins said that he knew a lady who uses sixty to ninety grains of morphia daily. There is no impairment of digestion.

Dr. Uhler referred to two cases of belladonna-poisoning. In one he used stimulants, in the other opium. The results were equally good.

At this point quite a spicy discussion arose upon the supposed antagonism of belladonna and opium, and the reliability of therapeutics. The general opinion was that no true antagonism exists between the two

drugs mentioned. In regard to therapeutics, the assertion was made that it was so unreliable that it was difficult to base any opinion upon it, and that it did not become any one to dogmatize in the matter; that any dunce can prescribe, but that it requires education to diagnose and apply proper remedies to the existing condition of the patient.

At the Baltimore Medical Association, the President, Dr. Tanneyhill, related the case of a lady who had aborted eleven times from syphilitic contamination. Potassium iod. and hydrarg. bichlor. had been used, and under their influence the child had approached nearer to a healthy condition than in any previous pregnancy; but in none was the child viable. He thought that there was hope that eventually she would bring forth a living child.

Dr. Atkinson said that in long-standing cases of syphilis the tendency is to relapse, and that it is necessary to keep up the treatment for a long time.

Dr. Tanneyhill said that in this case he had treated it continuously for nine months.

Dr. Hoel said that a gentleman who had suffered from syphilis years ago, consulted him in regard to the propriety of marrying, which he discountenanced. Another physician, however, informed him that there would be no danger, and he married a healthy widow. She aborted at six months. In her second pregnancy she exhibited nodes on the tibia, and syphilitic disease of the nose. The child was withered, and was unable to nurse. It was kept alive by brandy, and, after it had gained a little strength, was put to a wet nurse, and did well. The parents were placed upon anti-syphilitic treatment, and, eighteen months after, the mother was delivered of a perfectly healthy child. For seven months there were no signs of syphilis, and the treatment was discontinued. He was called one night to see her, suffering from what was supposed to be cholera morbus, but which proved to be gastritis. She was getting along well, when paralytic symptoms appeared, and she died in a very short time. He thought this paralysis due to syphilitic disease of the nervous system, especially as she had complained for some time of a dull boring pain in the side of the head.

The Medical and Surgical Society held its annual election on the 7th instant. The officers for the year are—President, Dr. J. W. P. Bates; Vice-Presidents, Drs. C. M. Morfit and J. R. Uhler; Recording Secretary, Dr. G. L. Wilkins; Corresponding Secretary, Dr. J. H. Rehberger; Treasurer, Dr. P. Dausche; Committee of Honor, Drs. Morris, Monmonier, and Rennolds; Executive Committee, Drs. Cathell, Evans, and Dodge; Committee on Lectures and Discussions, Drs. Winternitz, Caldwell, and Rutledge; Librarian, Dr. E. F. Hamel. After the election, the Society was invited to partake of a fine supper provided by the retiring President, Dr. Morris. The session was quite prolonged, and was enjoyed by all.

The Maryland Academy of Science formally opened their new hall last week, with an oration by Prof. E. Lloyd Howard, M.D. After much hard labor and many disappointments, the Academy, from a very weak organization, has developed into a strong and earnest scientific body. It contains the names of many prominent physicians on its roll, and they add much to the interest of its semi-monthly meetings. Its collection is large, well displayed, and constantly increasing. Prof. Philip R. Uhler, the Librarian of the Peabody Institute, is the President. MEDICUS.

PROCEEDINGS OF SOCIETIES.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

AT a conversational meeting held Wednesday, December 9, 1874,

Vice-President Dr. I. S. ESHLEMAN in the chair,

Prof. HENRY H. SMITH presented to the Society a patient suffering from a very bad *ununited fracture of the shaft of the femur*.

Before showing the limb, Dr. Smith requested the gentleman to walk the length of the hall, which he did with only a slight limp.

Dr. Smith then read the following history of the case.

"Colonel J. W. T., of Iowa, æt. 56 years, was thrown from his wagon on the 20th of May, 1873, and his right femur broken, so as to make a comminuted fracture that separated the entire middle third of the femur from its superior and inferior thirds. After being dressed for nine weeks with a straight splint, he was permitted to sit up, the splint being removed. It was then discovered that, whilst there was partial union of the upper and middle thirds, there was no union at the junction of the middle and lower thirds of the bone. Upon consultation, about the eleventh week after the injury, it was decided to place a *seton* between the ends of the bones at the lower seat of fracture. This being left in place for eight days developed such active suppuration under the femoral fascia, with high inflammatory fever, as to threaten the patient's life, and the seton was therefore withdrawn. Ten days subsequently, when the general symptoms had improved, the fracture was again permanently dressed with the same straight splint, and the patient kept at perfect rest, on his back, for eight weeks. On again examining the limb, twenty weeks after the accident, no union had been obtained, and, as his general health and strength were much impaired by suffering and confinement, it was decided to put him on crutches and let him take exercise as he could.

"After three months' trial, the failure of union rendered the limb a useless encumbrance. At this time he was advised by his physician to go to Chicago and obtain one of Dr. Smith's artificial limbs for ununited fracture, as represented in his 'Surgery.'

"This apparatus, though imperfectly made and fitted, enabled him to obtain some use of the limb, so that, by the aid of crutches, he was able to travel to Philadelphia, where he has been fitted by Spellerberg & Gemrig with two limbs, to insure him against injury to either one."

His ability to walk well with the artificial limb was thoroughly recognized by the Society. The apparatus being removed, the members examined the limb freely and found as follows:

Present condition, December 9, 1874.—The fracture is very apparent, and the union of the lower and middle thirds of the femur so imperfect as to permit the leg to be bent to a right angle with the middle of the thigh; the leg and foot to be rotated so that the calf and heel

would be uppermost whilst the patient lies on his back, whilst the end of each fragment is closed at its medullary canal and solidly rounded off. Extension separated these ends about one and a half inches. The upper and middle thirds at the seat of fracture presented a true false-joint, the ligamentous union of which gave more firmness to this fracture, but it was unable to sustain the limb. The entire thigh was much emaciated, the muscles atrophied, and the course of the seton between the ends of the lower fracture was readily seen.

Dr. Smith said he had especially wished the members of the Society to see how well this patient could walk with the apparatus on, though his limb was otherwise useless, because he had for a long time taught and shown that amputation for an ununited fracture was an unjustifiable operation, a patient walking better with his limb on in one of Dr. Smith's forms of splint than he could with his limb off in the best artificial limb ever made. There was also the constant chance of union being obtained through the apparatus, by the principle proposed by Dr. Smith,—viz., pressure and motion at the seat of fracture.

Dr. Smith also stated, in reply to an inquiry by Dr. Lee, that he had published a full account of the forms of his apparatus, principles of treatment, etc., as required in the treatment of ununited fracture, in his work on Surgery, and also in the *American Journal of the Medical Sciences*, vol. xxix., new series, 1855, and had given drawings of the apparatus, which were also published in most of the catalogues of the cutlers in the United States; but, as his paper appeared to be unknown to many of the members of the Society, Dr. Smith proposed referring to the subject of this treatment on some future occasion.

The apparatus, he stated, was applicable to every form of false-joint in any of the extremities, as the fore-arm, etc.

Dr. O'HARA asked the experience of the gentlemen present on scarlatina as at present occurring.

Dr. HAMILTON said, in reply to a question by the President in regard to the prevalence of scarlet fever, that he had not seen many cases lately; that the returns of the Board of Health, the only reliable source of information, showed a slight increase for the few past weeks. In this connection, Dr. H. stated that in one family he had recently seen four children affected with, apparently, a combination of diphtheria and scarlet fever. Two of the cases were very mild, the third not severe, the fourth violent and peculiar in some features. No rash appeared in any instance. The attendance upon the fourth case, a boy of eight years, whose throat was ulcerated and nasal passages discharged an excessive amount of fetid purulent fluid, had ceased, but was, at the end of five days, resumed. The face and feet were then œdematous. Two days later, the right side of the chest gave no normal sound; left side perfectly resonant. In three or four days the resonance had returned, almost completely, to the right side, and had disappeared from the left, to return almost as quickly as in the case of the right side. An examination of the chest was made during convalescence, by Dr. William Pepper. The special feature of this case is of course seen in the rapidity of effusion and absorption of serous fluid.

Dr. H. C. WOOD, Jr., then delivered a lecture on the principles which govern the use of electricity in paralysis.

Dr. BALDWIN asked Dr. Wood how soon after the occurrence of an attack of hemiplegia he would consider it safe to commence the use of electricity.

Dr. WOOD answered, usually not for two months; the use to be continued until the muscles had recovered their normal tone.

Dr. BARR said that Bard and Rockwell, in their "Medical and Surgical Electricity," mention the case of a dog, whose skull had been trepanned, in which the ascending current caused the vessels to contract and the brain to fade perceptibly, while the descending current caused the vessels to fill and the brain to protrude through the opening in the cranial vault. He also asked how Dr. Wood accounted for the fact, if such it be, that one pole of the faradic current gives more pain to the hand than the other.

Dr. WOOD replied that usually it was very difficult to distinguish between the poles of a secondary current. He had always seen those who said they could do it fail when the electrodes were applied to the arm. Undoubtedly, however, one of the to-and-fro currents is stronger than the other.

Dr. COLLINS thought the same effect was produced by both poles when the pressure and moisture were the same.

GLEANINGS FROM OUR EXCHANGES.

SPERMATIC COLIC.—Reliquet insists much on these facts in making the diagnosis: 1, that the first pain is produced suddenly at the time of coitus; 2, that subsequently every erection, or even every desire for coitus, produces pain. They are, he says, the subjective symptoms. These, combined with the objective signs, especially with the uniform swelling of the seminal vesicle, should lead to a correct diagnosis.

He reports the case of a man, æt. 35, who for several years had often suffered, when at stool, from the emission of a small quantity of thick, white liquid. For two months he had experienced pain, extending from the anus to the perineum, or emissions, during coitus or when emptying the bowels. The erect posture and walking provoked frequent micturition. Attempts to retain his urine caused acute pain and cold sweats. The pain lasted four or five minutes after urination. He lost desire to sleep. Venereal desires and erection provoked pain. During one month and a half he had passed small quantities of blood with his urine.

A gum-elastic bougie was passed easily into the bladder, but caused excessive pain in the deep part of the urethra. He was sounded for stone the next day, but no foreign body was discovered in the bladder. On examination from the rectum, the left vesicula seminalis was found swollen, hard and smooth. It was painful on pressure. After the sounding, an attempt was made to pass the bougie once more, but the instrument was arrested at the neck of the bulb, and then withdrawn. After two or three minutes of extremely sharp, cutting pains in the penis and the anus, the patient stooped down, and, emptying the bladder, expelled as many as forty small opaque white bodies, about the size of a small pin's head or a lentil. They presented facettes and blunt angles, like prostatic calculi, but their consistence was soft, and they could be crushed between the fingers. To the naked eye they appeared to be formed of a white homogeneous material, devoid of any capsule.

After the passage of these bodies, the symptoms quickly subsided, and, on examining from the rectum on the third day, the left seminal vesicle was found of the same size as the right.

The bodies were found to correspond closely to the concretions found in normal vesiculæ, only greatly increased in volume.—*Atlanta Medical and Surgical Journal*, December, 1874.

OPTIC NEURITIS (*The Lancet*, Jan. 16, 1875).—Dr. Hughlings Jackson insists (1) that severe neuritis may exist when the patient's sight is apparently perfect, and (2) that neuritis may (with large doses of iodide of potassium) pass away, leaving sight quite good.

FORCE AND STIMULANTS.—*The Lancet* of Dec. 12, 1874, asserts editorially that at the present day our treatment has assumed a character too decidedly stimulant and not quite sufficiently nutritive. Stimulants ought to be regarded as auxiliaries to nutrition more than they are at present. Nutritive material, as milk, meat-juice, eggs, and various forms of starch, ought to form a greater matter in the dietary of the sick than stimulants, whether nitrogenized or alcoholic; such materials, when assimilated, give supplies of force. Stimulants may assist in their assimilation, and do so; but in themselves stimulants only furnish limited supplies of force-bearing material. They are, however, a means by which the system may reach some of its physiological reserve fund. Such use may be advantageous or pernicious, according to circumstances; and an ill-regulated or excessive process of stimulation may give results as disastrous as a wise and intelligent resort to stimulants may be beneficial and preservative in its consequences.

TREATMENT OF SYPHILIS (*The British Medical Journal*, Dec. 12, 1874).—Mr. James R. Lane thinks that in the treatment of syphilis the main principle to be followed is, that mercury is the remedy for the secondary stage, and that the iodides are the remedy for the tertiary. He believes iodine to be seldom if ever useful, and usually harmful in the first, while mercury is rarely if ever admissible in the latter. There are cases, however, in which the two conditions overlap, in which tertiaries become developed while chronic secondary affections still remain; and here a combination or alternation of the two remedies becomes useful; alternation being better than combination, the iodide being used first until the tertiary symptoms are removed or amended and the health improved; after which a mild course of mercury may be cautiously resorted to for the remaining secondary affections.

ANEURISM (*The Lancet*, January 16, 1875).—Mr. C. F. Maunder believes that the result of the inquiries which Mr. Holmes has made will alter the views hitherto held by surgeons, as it appears that the mortality from ligature after compression has failed is ten per cent. greater than when the Hunterian operation has been performed at once, while others were not cured. Allowing for accidental circumstances, the results of the two methods, compression and ligature, have been as nearly identical as possible in a long series of cases extending over many years and a large variety of districts. Prolonged, gradual, and intermittent compression may either retain the aneurism *in statu quo*, or favor ill success altogether; but it must also be borne in mind that rapid compression is sometimes followed either by a return of the disease or by suppuration and sloughing of the sac. Of one hundred and six cases in which compression was tried, it was necessary to resort to the ligature in fifty-six; forty-seven recovered, and nine died.

The mode of treatment which Mr. Maunder advocates for the cure of popliteal aneurism, and all other suitable cases, is moderate compression, alternating with relaxation, say for a fortnight, with a view partly, if thought desirable, of promoting a more free collateral circulation in the limb; and, at the expiration of this time, continuous compression, either digital or instrumental (completely obstructing the artery), maintained under chloroform or opium, if necessary, for a period of from six to twelve hours, or even longer, and assisted by a tourniquet on the distal side of the sac if the first attempt does not succeed. Should a few sittings fail to effect good progress in the aneurism, the ligature must be resorted to.

After a review of his experience, he comes to the following conclusions:

1. That no case of aneurism is to be regarded as necessarily incurable.
2. That some cases of internal aneurism are apparently cured by absolute and prolonged rest, restricted diet, and other medical treatment.
3. That, when possible, compression, either proximal or distal, is to be employed in addition.
4. That in all aneurisms in which treatment by ligature is known to be a very fatal operation, the above rules are to be first applied.
5. That the treatment of progressive aneurism at the root of the neck by the distal operation is justifiable after medical treatment has failed.
6. That in rare instances only may an aneurism be treated by ligature before compression has been tried and has failed.
7. That digital is to be preferred to instrumental compression.
8. That chloroform and morphia are valuable aids to compression.
9. That chloroform will probably prove to be a more effectual agent than morphia in all cases, but more hazardous.
10. That the value of morphia should be more thoroughly tested.

EPILEPTIC DREAMS (*The Lancet*, January 16, 1875).—In chronic conditions of mental impairment it seems certain that "subjective" sensations are factors in producing delusions. Thus, a lunatic who has subjective smells may think his food is poisoned (compare the popular theory of the development of dreams, etc.). The temporary subjective sensations which usher in an attack of epilepsy probably give a turn to the mental disorder at the onset of and after the paroxysm. The probability is that such subjective sensations, which are practically external, develop or give a turn to dream-like states preceding complete loss of consciousness, or to the delirium or mania sometimes following the paroxysm.

EFFECT ON RESPIRATION OF THE CONDITION OF THE RESPIRATORY CENTRE (*The British Medical Journal*, January 2, 1875).—In a recent lecture on the Experimental Investigation of the Action of Medicines, Dr. T. Lauder Brunton alluded to the condition which is called "apnœa" by the German writers, in which the blood circulating in the respiratory centre is not at all venous, but is perfectly arterialized; the centre is less sensitive, the natural irritant—carbonic acid—is diminished or removed, and the respiratory movements cease. He continued as follows:

The activity of the respiratory movements and the amount of air respired in a given time depend on the degree of excitement of the respiratory centre. As we have just seen, this excitement depends on two factors: 1, the excitability of the centre; and, 2, the amount of irritation applied to it. In general, the venosity of the blood determines both factors, and it is not the venosity of the blood in the general circulation which does this, but only of that blood which courses through the vessels of the medulla. This was shown by Hering, who passed a stream of arterialized blood through the vessels of the head while venous blood was circulating in those of the body. The respiratory movements then ceased exactly in the same way as if the whole blood in the body had been perfectly oxygenated. When he reversed these conditions, and passed arterialized blood through the body and venous blood through the head, asphyxial convulsions took place. This shows that the degree of activity of the respiratory centre in the medulla oblongata depends on the greater or less venosity of the blood circulating through it, and not on an irritating action exerted by venous blood on the ends of afferent nerves in the lungs or other viscera.

The excitability of the respiratory centre may be greatly modified: 1, by the temperature of blood in it; 2, by the action of drugs upon it. When the blood becomes warmer, the excitability of the respiratory centre is greatly increased; the movements of respiration become much more vigorous, and it is no longer possible, by the most active artificial respiration, to produce a state of apnœa. Certain drugs, as tartar emetic, or apomorphia, when injected into the veins, also prevent the production of apnœa; but whether they do so by increasing the excitability of the centre, or by acting as irritants to it, is uncertain.

Other drugs, such as chloral, greatly diminish the excitability of the respiratory centre, so that the respirations become fewer, notwithstanding the increase of carbonic acid in the blood to which their diminution gives rise, and if the dose be large they may stop altogether. Apnœa may also be produced by means of artificial respiration with great ease after their administration, and it may last so long that one is sometimes inclined to think that the animal is not going to breathe again at all.

Strangulated Hernia successfully treated by Pneumatic Aspirator.—An engine-driver, aged 50, had suffered for three months from inguino-scrotal hernia. When first seen, the tumor in the scrotum was found to be tender on pressure, the patient suffering intense pain, and harassed with frequent vomiting, flatulence, and general uneasiness. All efforts at reduction failed. The attempts to restore the intestine by means of taxis were renewed the following morning, the patient being put under the influence of chloroform, but the results were still negative. A No. 2 needle (Dieulafoy's) was accordingly thrust at right angles to and well into the sac; on turning the tap, about two drachms of a serous fluid and bubbles of gaseous matter were drawn into the instrument, proving that the bowel had been perforated. The aspirator was emptied, and again set, and the needle drawn somewhat outwards. This change of position evidently placed the point in the hernial sac, out of which were drawn from four to five ounces of sero-sanguineous fluid. The tumor suddenly collapsed, and, on manipulation, the hernial protrusion was found to have disappeared. The patient made a rapid recovery.—*Edinburgh Medical Journal*, December, 1874.

Catalepsy followed by Epilepsy (*The Lancet*, January 9, 1875).—Surgeon-Major Chapple reports the case of an officer, æt. 30, steady and abstemious in his habits, quick and intelligent intellectually, whom he was asked to visit in consequence of sudden illness. He found him sitting at a table, immovable, pale, cold, with a weak pulse, and entirely speechless. On removing him to bed, he remained in any position in which he was placed. Soon after his head rested on the pillow, startling sounds became audible, creaking and straining so intense that it seemed as if the bones must break if the noise came from muscular action. Up to this time the body had been placid and still as death, but a severe epileptic fit then occurred, with the usual convulsions, after which he regained his health.

Subsequently he had attacks of petit mal, sometimes three and four a day, but the grand mal did not occur oftener than three times a year. Bromide of potassium was of great benefit to him.

Periosteal Flaps in Amputation (*Chicago Medical Times*, January, 1875).—Tizzoni believes that the results of numerous operations on animals, and occasional examinations of stumps of patients, justify him in making the following statements as to the advantage of periosteal flaps:

1. The operation is easily performed. At the present day, when pain and blood are spared the patient, it is a matter of small consequence if a little more time is consumed than usual.

2. The periosteal flaps retract considerably, but equally and without wrinkles.

3. These flaps will remain spread over the cut surface of the bone.

4. In twenty-four hours there will be a firm adhesion between the medulla and the flaps. Later, they consolidate with the bone. This early adhesion is of the greatest practical significance. It protects the medulla from the influence of the pus that may possibly form about the end of the bone.

The Sleeping Sickness of Western Africa (*The British Medical Journal*, January 2, 1875).—Surgeon-Major Gore gives a history and description of African lethargy, the treatment of which has proven so unsatisfactory, and the mortality so great,—seventy-three per cent. of those attacked having died. The first intimation is a swelling of the glands about or around the neck, accompanied by a gradual inclination to sleep, which increases; and the person so affected will fall asleep at all times, and in all places, no matter what he may be doing,—working, eating, walking, talking, or anything else,—only awakening at short intervals. Sometimes the body swells in the progress of the disease, and at other times in its first stage. The skin becomes dry and dusty, the strength palpably decays, and the most massive form becomes reduced. This continues for six or twelve months, more or less. Just before death, the patient suddenly ceases to sleep; this is the forerunner of death always.

Gastro-Pulmonary Fistula.—Fistulous openings between the stomach and other organs are, it is well known, the occasional consequence of the progress of gastric ulcers. Perforation of the diaphragm is one of the rarest of these events, and very few instances of it are upon record. A well-marked case, however, is described by Dr. Juliusburger, of Breslau, in the *Berliner Klinische Wochenschrift*, and is of especial interest from the marked symptoms which existed during life and rendered the diagnosis of the condition tolerably easy. Symptoms of gastric ulcer had existed for some months, when signs of perforation showed themselves, with peritonitis, etc., followed by fulness of the right side of the epigastric region, and in a day or two by dulness in the right side of the thorax. A month afterwards, after a rigor, quantities of stinking fluid were coughed up; the epigastric swelling, before dull, became resonant, and pressure upon it increased the expectoration, in which from time to time particles of food were found. Death occurred two months afterwards, and an ulcer was found on the posterior surface of the stomach, near the pylorus, which communicated by a small opening with a cavity the size of a fist, formed apparently by peritoneal adhesions, and containing air and fluid. At the upper part of this, a small opening through the diaphragm, about the size of a fourpenny-piece, communicated with the right lung, the openings of several small bronchial tubes being exposed. In both lungs there was disseminated tubercle, and in the spleen were some pyæmic abscesses.—*The Lancet*, January 16, 1875.

Treatment of Typhoid Fever by Cold (*The Practitioner*, January, 1875).—Dr. Frederick T. Roberts objects to a routine hydropathic treatment of any fever, but thinks it highly desirable that the members of the medical profession should be more generally impressed than they are at present with the usefulness of the various modes of applying cold to the surface of the body in febrile cases under certain circumstances.

He believes that the cases in which the more severe

methods of applying cold are indicated are those in which the temperature is already very high, and remains so, or shows a tendency to rise rapidly, especially if at the same time there are signs of much nervous disturbance. Unquestionably, this plan of treatment is not resorted to under these circumstances nearly so frequently as it ought to be. It is difficult to lay down any exact rule as to what temperature indicates the necessity for adopting it, but if it reaches to 106° Fahr., and shows no tendency to fall, or, still more, if it continues to rise, this treatment deserves due consideration. Necessarily, much will depend on the actual condition of the patient, and every case must be thoroughly considered in all its features. The best method seems to be decidedly that of placing the patient in a tepid bath and gradually cooling it. Affusion over the head is useful if there are marked nervous symptoms.

TREATMENT OF THE DIARRHŒA OF TYPHOID FEVER (*The Practitioner*, January, 1875).—Dr. George Johnson, after an experience of many years, has arrived at the conclusion that in the treatment of typhoid fever careful nursing and feeding are of primary importance, while, as a rule, no medicines of any kind are required, and, when not required, they are often worse than useless. The patients are fed mainly with milk, with the addition of beef-tea and two raw eggs in the twenty-four hours, and he gives wine or brandy in quantities varying according to the urgency of the symptoms of exhaustion, especially in the advanced stages of the disease. Milk should be given alone, unless the patient is able to digest eggs and beef-tea, and is one of the best antidotes for the diarrhœa of typhoid fever.

SYPHILITIC HÆMOPTYSIS (*The Lancet*, January 16, 1875).—At a recent meeting of the Clinical Society of London, Dr. Farquharson related a case of hæmoptysis occurring in a syphilitic patient, with no abnormal physical signs in the heart or lungs, and rapidly cured by iodide of potassium and perchloride of mercury. He believed the disease was due to an exudation analogous to that in condylomata, occurring in the minuter bronchial tubes, from which blood is slowly poured out into the air-vesicles, and, accumulating there, sets up irritation and gives rise to the hard cough. Hence the danger that destructive changes might take place in the lung-tissue if the exudation remained unabsorbed, and the value of anti-syphilitic treatment as compared with astringents.

Dr. Southey observed that such cases of hæmoptysis were not rare in syphilis, and that violent hæmoptysis was often the first symptom of disease of the lungs in syphilis. In these cases he had observed that the blood was dark-colored, and not bright red, as in phthisis; and there might be no physical signs in the lungs except the loss of breath-sounds over parts of the lung. He thought it probable that the exudation might be in the air-vesicles, and not in the small bronchi, in many cases, and the pathological condition giving rise to it was probably thrombosis of the pulmonary veins. Thrombosis is known to occur not infrequently in syphilis in the systemic veins; and this explanation would account for the absence of physical signs.

THERAPEUTICS OF IODIDE OF POTASSIUM (*The British Medical Journal*, January 2, 1875).—Mr. J. M. Wilson used iodide of potassium, in four-grain doses, every three or four hours, in a case of asthma. In a short time the asthma was relieved, but the patient was seized with intense pains across the loins, diminution in the secretion of urine, and great pain on passing it. This condition was relieved by appropriate treatment, and for a fortnight no medicine was given. Then the asthma returned, and the iodide was given again, and was followed in a few hours by threatenings of the same pain and discomfort. The case was one in which there was a strong rheumatic diathesis, and the trouble following the administration of the iodide probably resulted from its having caused an increase in the amount of uric acid to be secreted by the kidneys. Dr. James Lairne believes that the one distinct and indisputable action of the iodide of potassium is that of *stimulating the mucous membranes* and promoting their secretion. He explains in this way its beneficial effect in chronic winter cough, in asthma, in chronic bronchitis, in diphtheria, etc. He believes also that in all the various manifestations of struma, where the medicine is of service, it acts, so far as the iodine is concerned, in stimulating the mucous membrane of the stomach and duodenum—possibly by sympathetic action the liver and pancreas also—to increased secretion, whilst its alkaline base tends to promote the digestion of fat and starch. In such diseases as diphtheria, the object should be to produce its influence as rapidly as possible, whilst in others, as struma, small doses long continued are preferable.

UNILATERAL PARALYSIS OF THE PALATE (*The Lancet*, January 16, 1875).—In some recent remarks, Dr. Hughlings Jackson said that he had not discovered paralysis of the palate in uncomplicated disease of the portio dura nerve, and that deviation of the palate is not uncommon in healthy people.

This statement may seem a rash one, as paralysis of the palate is said by physicians of the greatest eminence to occur with facial palsy, owing to disease of the trunk of the portio dura nerve above the giving off of a branch to Meckel's ganglion, which branch, through the intermediation of that ganglion, is believed by most anatomists to supply the levator palati. According to Troeltsch, however, the levator palati is supplied by the vagus nerve. This would accord with the results of Dr. Jackson's clinical observation, as he has found well-marked palsy of one side of the palate, along with palsy of the vocal cord on the same side, from intracranial disease.

TREATMENT OF HYDRARTHROSIS.—In cases of dropsy of the joints, especially that of the knee, Dr. Bergeret finds the continued application of bags of hot sand to answer better than any other kind of treatment. When the acute stage is passed, and whatever may be the cause of the dropsy, he wraps the joint in a thick layer of cotton-wool, and applies to this a sac containing two or three litres of fine and very hot sand. The dropsy disappears in a few days. The sand must be very hot, and the heat may be kept up by means of covering with a blanket. The sand must not be too thick in the bag, so that it may extend easily on the knee, and overhang the hydrarthrosis in every direction.—*Journal de Thérapeutique.*

THE DIAGNOSIS OF FATTY DEGENERATION OF THE HEART IN ADVANCED LIFE (*The Lancet*, January 9, 1875).—Dr. Leonard H. Jayne, after seeing a number of fatal cases of fatty degeneration of the heart, believes that certain symptoms are diagnostic of that disease,—viz., feeble and irregular or intermittent pulse, dyspeptic symptoms, epigastric pain, frequent vomiting (more especially after taking food), and diarrhœa. In cases of simple hypertrophy, where there was no fatty degeneration present, he has never observed such symptoms as vomiting, gastric pain, diarrhœa, and feeble and irregular pulse.

SATURNINE GOUT (*The British Medical Journal*, January 2, 1875).—Dr. Wilks reports a case in which lead-poisoning was followed by well-marked symptoms of gout, both being relieved by the use of opium and iodide of potassium.

MISCELLANY.

GOLDING BIRD ON IMBEDDING IN ELDER-PITH FOR CUTTING SECTIONS.—C. H. Golding Bird (*Quarterly Journal of Microscopic Science*, January, 1875) finds elder-pith, much used in former years, a very favorable imbedding material for cutting sections. The principle recommended by the author is the same as that adopted by Ranvier, viz., the swelling of the parenchymatous tissue of the dried pith in the presence of moisture. The object to be cut is placed in elder-pith, and this is fitted into Ranvier's microtome. If water be poured upon it, the pith will have swollen in a very short time sufficiently to hold the specimen firmly in its place. "As to the quality of the sections obtained, I am almost converted," says the author, "to the belief that it matters but little, except in one or two cases, how or in what one imbeds, but that a good result is rather owing to the skill and ingenuity of the manipulator in each particular case. Every one upholds, naturally, the way in which he himself is accustomed to work, and rightly so."—*London Medical Record.*

THE PROFESSION IN FRANCE.—The number of medical men in France seems to remain stationary. In 1847 there were 10,643 practitioners, or one to every 3244 inhabitants. In 1866 there were, taking in the annexed departments, 11,525, still, by a singular coincidence, averaging one to the same number of inhabitants above cited. In 1872, when Alsace and Lorraine were lost to France, there were only 10,766 doctors, or one to each 3353 inhabitants. This dearth of medical assistance is attracting considerable attention in France, and is likely before long, according to the *Revue Scientifique*, to become the subject of legislative interference. The unequal distribution of the available number of medical practitioners renders the situation all the more serious: for instance, in the department of the Seine there is a doctor to every 1115 inhabitants, whilst in the department of the Morbihan there is only one to each 10,576 of the population,—a scarcity of medical aid which is surpassed in the case of one department, which rejoices in the medical care of one practitioner only for 11,000 people.—*London Medical Record.*

FEMALE OBSTETRICIANS. — Notwithstanding a few plausible arguments that may be adduced in favor of female obstetricians, it is, we think, a moot point whether obstetrics is not, after all, the very department of medical and surgical practice for which women are morally and physically least fitted. Perhaps, indeed, the strongest disqualification of the female obstetrician is the moral; but the physical incapacity of women is more apparent. No one who knows anything of the arduous and anxious duties of the obstetrician, of his exposure to rude and inclement weather, or of the serious contingencies of midwifery practice, is justified in seriously encouraging women to enter upon this field of labor. —*London Lancet.*

THE value of sponges collected this season on the Florida reef is estimated at $165,000.

PURVES ON THE PLACE WHERE THE WHITE BLOOD-CORPUSCLES WANDER OUT OF THE VESSELS.—L. Purves (*Onderzoekingen gedaan in het Physiol. Labor. Utrecht*, 1873, iii.), to investigate the place where the white blood-corpuscles pass through the wall of the vessel in Cohnheim's experiment on inflammation, injected a solution of silver into the vessels of a frog prepared after the manner of Cohnheim. The colorless corpuscles, without exception, wander out between the boundaries of the epithelioid cells. They never pass through the substance or through the nucleus of an epithelioid cell. According to the author, the red corpuscles only pass out by those channels which have been previously made for them by the colorless corpuscles. The author found no stomata of any kind on the epithelium of the vessels.—*London Medical Record.*

ACCORDING to the *Pharmacal Gazette*, M. Hayduck has been investigating orthoamidotoluenesulphonic acid, and diazorthoamidoparatoluenesulphonic acid; the same authority also affirms that the action of tin and hydrochloric acid on nitro-bromacetanilide gives rise to the hydrochloride of ethenylbromophenylenediamine.

DR. W. R. GILMORE, Ambulance-Surgeon at the Reception Hospital, New York, recently died from the effects of a curious accident. Owing to an icy sidewalk, he fell upon the point of his umbrella, which penetrated the orbit.

NOTES AND QUERIES.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES:

DEAR SIR,—*One and one-half* grains of digitalis were administered every two hours, and not half a grain, as stated, in the case of Mr. T., published Jan. 23.

A. K. MINICH.

SCHUYLKILL COUNTY MEDICAL SOCIETY.

At a regular stated meeting of the Schuylkill County Medical Society, held at Pottsville on Wednesday morning, Jan. 6, the following officers were elected:

President, Dr. G. K. McKibbon, Ashland.
Vice-President, Dr. A. P. Carr, St. Clair.
Treasurer, Dr. W. H. Senderling, Port Carbon.
Secretary, Dr. R. S. Chrisman, Pottsville.
Corresponding Secretary, Dr. J. J. Yocum, Ashland.
Censor, Dr. W. R. Owens, Ashland.

Doctress Mary A. Swayze was elected a member of said Society.

Dr. A. P. Carr read a very interesting paper on Croup, and presented a specimen of false membrane showing a perfect cast of a part of the bronchial tubes.

NORTHERN MEDICAL ASSOCIATION OF PHILADELPHIA.

A stated meeting will be held at the Hall of the Northern Dispensary, 608 Fairmount Avenue, on Friday evening, February 26, at 8 o'clock.

Subject for discussion: "Anomalies of Refraction," with exhibition of new instrument for determination. To be introduced by Dr. S. D. Risley.

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U.S. ARMY, FROM FEBRUARY 2, 1875, TO FEBRUARY 8, 1875, INCLUSIVE.

BENTLEY, EDWIN, ASSISTANT-SURGEON.—To proceed to Camp Bidwell, Cal., for temporary duty at that post, and, upon its completion, to return to his station in San Francisco, Cal. S. O. 11, Department of California, January 25, 1875.